

**Agency Electronic Health Record System
Task Force Meeting/WebEx
March 10, 2010
11:30am to 12:30 pm**

Attendees:

Ames Research Center	X	Jet Propulsion Laboratory	X	Michoud Assembly Facility	
Dryden Flight Research Center	X	Johnson Space Center	X	Stennis Space Center	X
Glenn Research Center	X	Kennedy Space Center		Wallops Flight Facility	
Goddard Space Flight Center	X	Langley Research Center	X	White Sands Test Facility	
Headquarters	X	Marshall Space Flight Center	X	Office of the Chief Health and Medical Officer	X

Welcome

Helen Shoemaker

The agenda for today is to provide an update on the Electronic Health Record System (EHRS) Project, share with you our experience at the annual Medgate User Group Conference, and discuss some of our configuration issues. We will be presenting some of the configuration issues identified in the PowerPoint (Slide 1) presentation, discuss the implications of those configuration decisions in the system, and obtain feedback from the Centers represented on this call today. Hopefully we will be able to get through most of them today. We will close today's meeting with a list of action items for the Centers and the Agency Occupational Health (OH) office.

EHRS Project Update

In previous meetings we have discussed the decision to bring the hosting of Medgate inside of the NASA firewall in order to meet all of the Federal IT security requirements. That decision required a modification of the government contract with Medgate. A new statement of work was sent to Medgate and they have responded to that request. The discussions with Medgate continue and that process continues to move forward.

At the same time the requirements for hosting Medgate inside the NASA firewall have been defined and the contract for the hosting is moving forward. The disaster recovery site for the EHRS will be at the Johnson Space Center (JSC). The discussions with JSC on the disaster recovery strategy have begun.

The EHRS Project Team continues to meet bi-monthly. The testing of the system continues and the final configuration is under review. As a result of system testing we will be discussing some of the final configuration issues today with this group.

The demographic feed for the EHRS has been tested with fake employee data. The work with Marshall Space Flight Center (MSFC) on refining the data elements for the actual demographic feed continues to be worked.

We have received the audiometric files from several Centers and will be testing those as soon as we have the actual employee demographic feed. Since those files are more than one year old we will be requesting updated files and we will load those just prior to each Center's go live date.

The work continues on the laboratory interface issue. This issue is being worked at the Agency level due to the IT security concerns.

The EHRS Records Management Plan continues to be worked by Mae Hafizi with support from the Kennedy Space Center (KSC) Records Manager, Jan Justice, and Donna Read from the National Archives and Records Administration (NARA). The plan is near completion and will be sent for review by the NASA Records Officer Patty Stockman.

Medgate User Group Conference

The Medgate User Group Conference held in February was attended by the Agency OH office (Dr. Moore, Nancy Eckhardt, and Helen Shoemaker) and SSC (Sue Smith, Chief Nurse and Jessica Necaie, Nurse Practitioner). The conference gave us an opportunity to network with other Medgate Users from other government agencies (Library of Congress, Centers for Disease Control and Prevention (CDC)) and major corporations (Merck, Disney, John Deere). There was a wide range of users at the conference—from long time Medgate users to new clients early in the implementation process. What we learned from other Medgate users is that they have had similar challenges in the overall project implementation process. The contacts we have made at previous conferences have been open to calls from our team to discuss some of the challenges and how they manage similar situations in their system. They have been a valuable resource for us.

At each Medgate User Group Conference there is a session for clients to identify enhancements they would like to see in the future. Some of the enhancements were discussed during one of the sessions this year and each attendee had the opportunity to vote on the enhancements post-conference. This helps Medgate to prioritize the future system development and enhancements. At our last meeting in February, Patty Oleksiak, Chief Nurse at Glenn Research Center (GRC) raised the issue of a physician co-signing the nurse practitioners clinical notes. We submitted the issue to Medgate, it was presented in the conference session on system enhancements, and it was on the list of enhancements for voting.

There were several sessions on Medgate GX at the conference. Medgate GX is the next generation software for Medgate. The highlights of the product are listed on the PowerPoint (Slide 4) but generally the application is more user friendly, offers improved tools, and enhanced functionality. GX is still under review and many factors are being considered including the maturity of the new software.

Several Centers using the Occupational Health Manager (OHM) system raised some concern about meeting IT security requirements. One Center is being asked to go through the recertification of their system and another upgrading their version of OHM from Windows to web based and then go through the certification process. As a follow-up to this the Agency OH office will gather additional information in order to determine the potential impact this may have.

Configuration Issues

Over the past several weeks we have been reviewing the system configuration and testing clinical scenarios. In the NASA test environment 24 visits were created using the eight "Visit Reasons". The visits were created between February 17 and 26, 2010. As a result of this effort we have identified some issues that need to be reviewed and discussed with each Center.

Labs

We have reviewed the base table configurations of the labs, the requirements of the NPR 1800 Physical Examination Matrix, and the Center specific protocols submitted. Most of the lab requirements

submitted included Complete Blood Count (CBC) and Complete Metabolic Panel (CMP). Slide 5 of the PowerPoint shows the Clinical Tests for a Health Maintenance Exam (CBC, CMP). On the next slide (Slide 6) you will see the components of the CMP (kidney and liver function, glucose, electrolytes, etc) built in our base tables. You will notice that the CMP does not include a lipid panel. If you refer to the NPR Physical Exam Matrix the lab requirement includes a blood chemistry panel. Each Center needs to go back to their spreadsheets and review what was submitted. We will be asking you to update those and resubmit them to us so we can modify the base tables. It was requested that Nancy Eckhardt send each Center their spreadsheet.

Codes (ICD-9 and CPT)

In previous demonstrations of Medgate in the NASA test environment, you will remember that NASA specific codes were created for Diagnosis and Procedures. These codes will all prefaced with “000DX” or “000PR” for ease of use. Outside of NASA the use of ICD-9 and CPT codes is essential for healthcare providers to receive the appropriate reimbursement for services rendered. An example of the complexity of using these codes can be found on Slide 7. The use of ICD-9 and CPT codes is not critical for our system and would require additional training. The generic codes for our use were created for standardization and ease of data entry.

The discussion point is whether Centers prefer to go with NASA Codes for Diagnosis and Procedures. Currently there are 80+ NASA diagnosis codes and 55+ procedure codes. One Center has been asked for ICD-9 codes on occupational injury/illness cases from Safety for IRIS, another just a diagnosis. The Agency OH office will check with Safety on this issue. A suggestion was made to look at SNOMED; it is easier to use and can be mapped to ICD-9 codes. A decision was deferred until further information is collected and evaluated.

Activity Counts

Some of the configuration and the way data is entered into the employee medical record has an impact on the reports we are able to produce from Medgate. It also impacts the way information is viewed in the Electronic Medical Record (EMR) module. In order to evaluate this issue further we would like to get Center input on their need for their statistical/activity reports.

Several canned Medgate reports were run for the 24 cases entered as examples of the data that can be pulled from the system and the EMR, the following were reviewed:

- Slide 9 Report: Clinic Visit Reasons
 - This report shows the total number of clinic visits by “Visit Reason” for a specified period of time.
- Slide 10 EMR Occupational Injury with Revisit
 - This is the EMR screen for the employee with an occupational injury visit on 02/17/2010 and a revisit on 02/18/2010 for the same injury. Note that the Case Number is the same for both visits. In previous demonstrations we showed an entry for an occupational injury and then created a revisit. When you create a revisit some of the data entry from the initial injury is carried over, e.g., visit reason, diagnosis, nature of injury, part of body and side of body.
- Slide 11 EMR Clinical Visits and Revisits
 - This is an example of a Health Maintenance Exam completed in three visits to the clinic. Since revisits were created from the original visit, there is a single case number for all three visits. Note the practitioner can enter any number of diagnoses but will need to identify the

number one diagnosis. The number one diagnosis will be associated with the case including the revisits and the specified diagnosis will appear in the EMR.

- Slide 12 Report: Clinic Visit Activity
 - Note the Activity column and the exams marked with asterisks are the specific Medical Surveillance, Certification and Clearance Exam. The report also gives a count of all of the associated activities. Note the Tdap vaccination as an Exam Activity when we go to the immunization report.
- Slide 13 Excel Spreadsheet: Clinic Visit Activity
 - The data from the canned report can very easily be exported into an Excel spreadsheet. Note that the activities are sorted A to Z with the Exam Types at the top of the report.
- Slide 14 Report: Immunization Counts
 - This report provides the total numbers of vaccines administered listed by vaccine type. All immunizations are recorded in the Immunization module and will provide an accurate account of all immunizations given.

Discussion Point

- For your metrics, which Centers need to identify total visits versus initial and revisits?
 - All Centers represented agreed they would like the total number of visits as well as the total number of cases (initial visits and revisits).
- To complete the components of your exam protocols does it require a single or multiple visits?
 - Most exam protocols require multiple visits to the clinic for completion, however, there are a number of protocols that are completed in a single visit.

Centers were surveyed in January about the use of Medical and Occupational History Questionnaires. All but one Center reported using a combined Medical and Occupational History Questionnaire. In the current configuration for Exam Activities the Medical History Questionnaire and the Occupational History questionnaire are listed separately.

Discussion Point

- Does the current configuration of the Medical History Questionnaire and the Occupational History Questionnaire as individual exam activities meet your needs or would you prefer one activity Medical/Occupational History Questionnaire?
 - All Centers in attendance preferred the current configuration with the questionnaires as individual exam activities.

The configuration of the exam activity for each protocol is based on the NPR Physical Exam Matrix. Many of the exams in the Matrix have discretionary tests and discretionary immunizations so we have configured the Exam Activities to include those to serve as a checklist (orders) for the providers. The configuration was reviewed on the following slides:

- Slide 16 Discretionary Vaccines Offered/Status Addressed (Healthcare Provider Exam)
- Slide 17 Discretionary Vaccines Offered/Status Addressed (Water and Sewer Surveillance Group)
- Slide 18 Discretionary Tests Offered/Status Addressed (Firefighter Exam)

Discussion Point

- Will this configuration for discretionary tests and immunizations meet your Centers need?
 - All Centers agreed that this configuration would be helpful.

There are a few exam protocols (Slide15) that cannot be defined in Medgate and must be manually tracked by the Centers. This has been discussed with other Medgate users and they manage these protocols manually. An example is a lead surveillance exam. When the blood lead comes back elevated the employee will need to be recalled in two months versus the 6 month recall in the base table.

Action Items

All Centers

- Review and update the labs for each exam protocol.
- Send updated/new labs and protocols to Nancy Eckhardt.

Agency OH Office

- Send each Center a copy of their spreadsheet with labs submitted.
- Update base tables (labs and exam protocols) after receipt from Centers.
- Request environmental copy (Medgate) so Centers can review any Center specific protocols in the Medgate test environment.
- Schedule reviews of labs/protocols and discuss workflow process issues with each Center.
- Collect additional information on the impact of OHM.
- Contact Safety regarding the IRIS reporting requirements (ICD-9 code versus diagnosis).
- Evaluate the use of SNOMED for diagnosis codes in Medgate.
- Schedule another meeting to revisit diagnosis codes, procedure codes, billing, and indicators.